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Date: January 26, 2009

Name: Richard G. Lione, Registration No. 19,795 Signature: /Richard G. Lione/

Our Case No. 5404/130

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Mutsuaki Murakami et al.

Serial No.: 10/565,716

Filing Date: January 25, 2006

For: METHOD FOR FORMING OXIDE  
FILM ON METAL SURFACE USING  
IONIC LIQUID, ELECTROLYTIC  
CAPACITOR AND ELECTROLYTE  
THEREOF

Examiner: Nguyen T. Ha

Group Art Unit No.: 2831

Confirmation No.: 7935

**REQUEST FOR RECONSIDERATION**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action of October 28, 2008, applicants respectfully request reconsideration of the rejection of Claim 23 (as well as dependent Claims 24-30). In that regard, the invention of claim 23 is embodied in a capacitor having a negative electrode including a composite material. The composite material includes a conductive polymer and an ionic liquid capable of repairing a defect in the anodized film forming a dielectric on a valve metal positive electrode. The capacitor of the invention realizes excellent electron conductivity and oxide film repairing ability by combining the

ionic liquid with the conductive polymer. As a result, an electrolytic capacitor with a low impedance and a high withstand voltage can be formed. Specifically, excellent electron conductivity is realized by the conductive polymer in the negative electrode and the excellent oxide film repairing ability is realized by the ionic liquid.

In the rejection, the Examiner contends that claim 23 is anticipated by the Shiraishi et al. ('289) reference. Specifically, the Examiner states that this reference discloses:

- a positive electrode (1) of a valve metal,
- a dielectric (3) of an anodized film formed on the valve metal
- and a negative electrode (5) including a composite material in contact with the anodized film,
- wherein the composite material includes a conductive polymer and an ionic liquid capable of repairing a defect in the anodized film.

In response to these statements, the applicants submit that although the negative electrode of the capacitor disclosed in the Shiraishi et al. ('289) reference has the conductive polymer, the negative electrode does not have the ionic liquid capable of repairing a defect in the anodize film. Accordingly, Claim 23 cannot be anticipated by the Shiraishi et al. reference.

Furthermore, since the composite material includes the conductive polymer and the ionic liquid in the claimed invention, the capacitor has a high withstand voltage compared to the capacitor which does not include the ionic liquid (see examples 28-44 and comparative example 4). Furthermore, Shiraishi et al. ('289) does not teach or suggest that the capacitor having the negative electrode including the ionic liquid has the excellent oxide film repairing ability and, as a result, has a high withstand voltage. As such, applicants submit that the claimed invention would not have been obvious.

Applicants thus submit that Claims 23-30 define novel and unobvious subject matter. As such, the application should be in allowable form.

Respectfully submitted,

/Richard G. Lione/

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